

REMARKS

The Office Action mailed on October 10, 2003, is acknowledged. Applicants request reexamination of the above-mentioned application in view of the above amendments and remarks which follow.

The Examiner rejected claims 1-6 and 8-16 under 35 U.S.C. §103(a) as being unpatentable over Shumate in view of Taylor. Firstly, the Shumate and Taylor references are not properly combinable.

Shumate shows a can-like structure having funnels 16, 16', 16", 16''' at one or both ends of the can 15. In Shumate, the bulb 20 is inside its chamber defined by the can and funnels. Shumate says that the funnel 16 has a light metal surface color to create a bright reflection. Shumate indicates this reflection is desirable to attract the insects into the trap. (See Column 2, lines 25-28).

Taylor discloses a generally cylindrical transparent wall 18 with a plurality of openings 21, however, it does not constitute a back wall of the type defined in claim 1. Rather, Taylor shows a transparent barrier surrounding bulb 17, with cylindrical wall 18 surrounding transparent barrier wall concentrically. Thus, one referring to the references Shumate and Taylor, would need to realize that Shumate is wrong in requiring the reflection, then realize that Shumate needs to have a back wall, and then place the light source on the opposite side of the back wall outside of the chamber. Taylor suggests none of these. There is, therefore, no incentive to replace the non-transparent funnel of Shumate by a transparent funnel and to provide a back wall which defines part of an internal trapping chamber. Moreover, in light of Shumate's disclosure, it would seem to teach away from replacing this surface finish with a transparent wall.

A "determination of obviousness cannot be based on hindsight combination of components selectively called from the prior art to fit the parameters of the patented invention." ATD Corp. v. Lydall, Inc., 159 F.3d 534, 546, 48 U.S.P.Q. 1321, 1329 (Fed.

Cir. 1998). Rather, prior art references are properly combined only when there is a suggestion, teaching or motivation to combine them and that suggestion, teaching or motivation comes from the prior art references themselves. C.R. Bard, Inc. v. M3 Systems, Inc., 157 F.3d 1340, 1352, 48 U.S.P.Q.2d, 1225, 1232 (Fed. Cir. 1998). Against this background, Applicants respectively submit that neither the Shumate reference nor the Taylor reference contains any suggestion or motivation to combine their teachings, and therefore are not properly combinable. In fact, Shumate's disclosure would teach away from the addition of Taylor.

Having regard to the Examiner's argument that the provision of an inner casing is merely a duplication of the outer casing, and hence not inventive, it is pointed out that the two casings have different configurations and different functions. The essential physical differences are that the inner casing includes the cover and the back wall. The term "inner casing" is used to differentiate the cover/back wall combination (which defines the trapping chamber) from the outer casing, and its back wall which defines the back of the entire trap.

Even if Shumate and Taylor were combined, however, their combined teachings would not suggest the trap as defined in claim 1. Thus, even if Shumate is modified by the inclusion of a back wall similar to the wall 27 of Taylor, that modification would merely place a cylindrical wall around the lamp 20 of Shumate. The internal surfaces of that wall would clearly be the wall facing the lamp, and would not, as called for by claim 1, define at least partly the chamber which holds trapped insects.

Moreover, as mentioned above, the inner casing (the funnel member 18) of Shumate is not transparent, having a light metal surface. Its outer casing (the cylindrical body 15) also has a light metal surface with its outer surface painted black. Consequently, the light can only be seen by an insect looking directly in line with the entry port at the end of the funnel. Here again, the inner casing of the trap of claim 1, being transparent over a wide area, gives improved insect attraction properties, in that it attracts insects present in a wide cone of view. Thus, the cover (funnel) in Shumate is intended to work in a different

way to that of the present invention: it is not transparent to the wavelength of the electromagnetic radiation source, rather, it is preferably of reflective metal, as indicated above.

Moreover, Taylor does not describe an inner back wall “to create an enclosed inner casing that can be a receptacle for insects,” as suggested by the Examiner. Rather, it merely discloses a substantially cylindrical cover for the incandescent bulb, whose function is to define a plenum chamber to enhance the airflow on which the device depends: see column 2 line 12-19: “A transparent barrier surrounding the incandescent bulb restricts the interior region volume and creates a gradually narrowing plenum chamber. The increased air velocity in the plenum areas aids in efficient insect capture”; column 3 lines 23-25. “Transparent barrier 27 surrounds incandescent bulb 17 and limits the volume of upper chamber 11, forming plenum areas 28.; and also see claim 3 - “.....further comprising a barrier disposed about said luminescent means defining an enhanced airflow region”; and claim 11 - “..... a barrier disposed about the means of attraction further defines said plenum.....”

Thus, Taylor does not disclose a trap having the features claimed in claim 1 (the back wall defining, at least partially, a chamber) – the barrier 27 is described only as such, and it is plain that its function, shape and disposition, are entirely different from those of the back wall of the present invention. It can be concluded, therefore, that modifying Shumate by including the barrier 27 of Taylor would simply place a cylindrical wall around the light source, and would not lead to the combination of features in claim 1. It would not define the chamber in the same way, only restrict its available volume to no purpose.

A further difference is that the insect holding chamber of Taylor is positioned remotely from “the back wall” 27, and that a fan is needed to force insects into that chamber. This is to be contrasted with the insect trap of claim 1, which requires no fan, and has its back wall formed with the inner casing. This arrangement has the advantage that the inner casing can easily be removed from the outer casing for insect disposal,

without any risk of insects being left inside the outer casing or on (or adjacent to) the source of electromagnetic radiation.

It is also contended that there are substantial differences between the trap as defined in claim 1 and the traps of Shumate and Taylor, namely:

The transparency of substantially the whole frontal area of the trap of claim 1, as compared with that of the thin end of the funnel in Shumate. This has the advantage of a correspondingly enormously greater attracting efficiency and range.

The completely different disposition of the retention chamber in Taylor—in particular, its location in a separate part of the trap spaced from the barrier 27.

The absence of any mechanical components such as the fan (potential unreliability, noise, difficulty in keeping clean, etc.).

The purpose of the back wall of the present invention is to define, at least partially, the trapping chamber, and this is essential for hygiene, safety and ease of maintenance. In particular, the light source is kept clean, insects are prevented from dying on it and among the associated electrical components, and the light source is protected from damage during routine emptying and cleaning.

The trap of Shumate has the following deficiencies, namely, it has very poor attracting efficiency as the electromagnetic radiation emitted is severely limited by the only light path to the outside being defined by the small aperture at the narrowest part of the funnel; it is very unhygienic in use because of the accumulation of dead insects around the source in the absence of a back wall; and the lamp is very vulnerable to damage during cleaning.

The trap of Taylor has the following deficiencies, namely, it needs a powerful fan to be effective and so is noisy and energy hungry; the strong airflow at the entry ports

creates substantial turbulence (thereby reducing the catching efficiency substantially for many important insects, such as house flies and blow flies which have a strong aversion to turbulent air, as demonstrated by other fan-based traps); insects attracted to the trap would settle randomly on the outer wall 18, only entering the trap when they chance on the opening, rather than being directed into it by a funnel; it is unsightly; and the catch would be reduced as the attraction of the light disappears quite quickly for many insects, so that those not entering straight away would fly away.

The Examiner also rejected claims 7 and 20-30 under U.S.C. §103(a) as being unpatentable over Shumate in view of Taylor, and further in view of Mah. Claim 20 defines a particularly important subsidiary feature of the invention, namely, the provision of the deterrent means. The argument put forward against this claim is a hindsight rejection. The positioning of the deterrent means adjacent to the entry port is not a mere rearranging of parts involving routine skill, as none of the very large number of citations discloses such a positioning of deterrent means. Surely, if such a positioning were routine or obvious, someone would have done it before now. More importantly, the use of a deterrent means with a funnel-shaped inner casing is not disclosed or suggested by the large number of prior art documents cited by the Examiner. In particular, Mah does not describe a deterrent means at all, the aim of the grid in Mah being for deleteriously affecting and disabling insects, and not to deter their escape. Grids disclosed elsewhere are to disable or kill, not for deterrence (from escape) at the point of potential exit.

Moreover, Mah is totally different in construction to that of Shumate and Taylor, thus, uncombinable in the opposite side as the chamber. In other words, it is not the light that attracts the insects into the chamber. Rather, the light source 21 and reflective surface 15 attract the insects, and the insects fall into the lower chamber 43. Given this, there would be no suggestion to combine these three references.

For all the foregoing amendments and remarks, Applicants believe that all of the pending claims are now in condition for allowance, and respectfully request early passage thereof.

Appl. No. 10/089,037
Amdt. Dated February 11, 2004
Reply to Office Action of October 10, 2003

If necessary to effect a timely response, please consider this paper a request for an extension of time, and charge any shortages in fees, or apply any overpayment credits, to Baker & Daniels' Deposit Account No. 02-0387 (75511.15). However, please do not include the payment of issue fees.

Respectfully submitted,

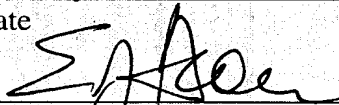


Eric J. Groen, Reg. No. 32,230
BAKER & DANIELS
205 West Jefferson Boulevard, Suite 250
South Bend, IN 46601
Telephone: (574) 234-4149
Fax: (574) 239-1900

I hereby certify that this
correspondence is being deposited with the
U.S. Postal Service as First Class Mail in an
envelope addressed to: Commissioner for
Patents, P.O. Box 1450, Alexandria, VA
22313-1450 on

February 11, 2004

Date



Eric J. Groen, Reg. No. 32,230